

QUALITAIR

INSTALLATION MANUAL



ICU CONDENSING UNIT

**IF SUPPLIED AS A SYSTEM (ICC, QKK, QLC)
PLEASE REFER TO INDOOR UNIT INSTALLATION MANUAL**

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ICU CONDENSING UNIT INSTALLATION MANUAL

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1. INSTALLATION & SAFETY

1.1 Installation

The units making up the Air Conditioning System must only be installed by a qualified engineer, following the mandatory and local codes of practice.

1.2 Handling

Care must be taken when the units are moved or lifted to ensure that everyone and everything is safe. When lifting equipment is used, it must be suitable and approved.

1.3 Application

Ensure that the unit is only used for suitable purpose/application.

1.4 Electrical connection

Electrical work and connections must only be made by authorised electricians, in accordance with mandatory regulations and local codes of practice.

1.5 Warranty

Failure to comply with the manufacturer's installation instructions could affect the performance of the unit and invalidate the warranty. Warranty is also subject to the implementation of a planned service/maintenance agreement as documented in the warranty booklet supplied with the unit.

1.6 Safety Procedure

General

1. All works must be carried out in accordance with the manufacturer's installation and operating procedures.
2. Good working practices must be followed at all times so that Mechanical and Electrical hazards are kept to a minimum.
3. The equipment has been fitted with doors and covers to prevent access during operation. These must be kept in place and additional guards fitted, if necessary.
4. The equipment must be connected to an external electrical isolator if one is not supplied fitted to the unit.
5. Servicing and maintenance must only be carried out by fully qualified and competent staff. Before any work is started, electrically isolate the units to make sure that they cannot be switched on accidentally and allow sufficient time for isolated parts to come to rest before removing panels. Electrical isolation switches must be labelled to show that they are OFF during servicing and maintenance operations.

Note: Some units are dormant in standby mode and can restart without warning if they are not electrically isolated.

6. Care must be taken not to touch components or pipework which may be extremely hot or cold, for a period after the unit is electrically isolated.
7. After completing any tasks ensure all guards, covers and doors are correctly refitted before restoring the power supply to the unit.
8. Air conditioning equipment may generate unacceptable noise levels. If noise levels are unacceptable sound and vibration attenuators may be required. For noise level guidance refer to technical literature, or contact the supplier for advice.

SPECIAL NOTE

IF ANYTHING IS NOT CLEAR, PLEASE CONTACT YOUR LOCAL SUPPLIER FOR CLARIFICATION.

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2. INTRODUCTION TO UNITS

2.1 ICU Outdoor Unit

The ICU unit is a floor-standing condensing unit which can also be wall mounted using the ICU Wall Bracket Option Kit. The unit is supplied complete with axial fan and guard, hermetic compressor, shut-off service valves, fan speed controller, low pressure switch, high pressure switch, start delay timer, winter start and an electrical section.

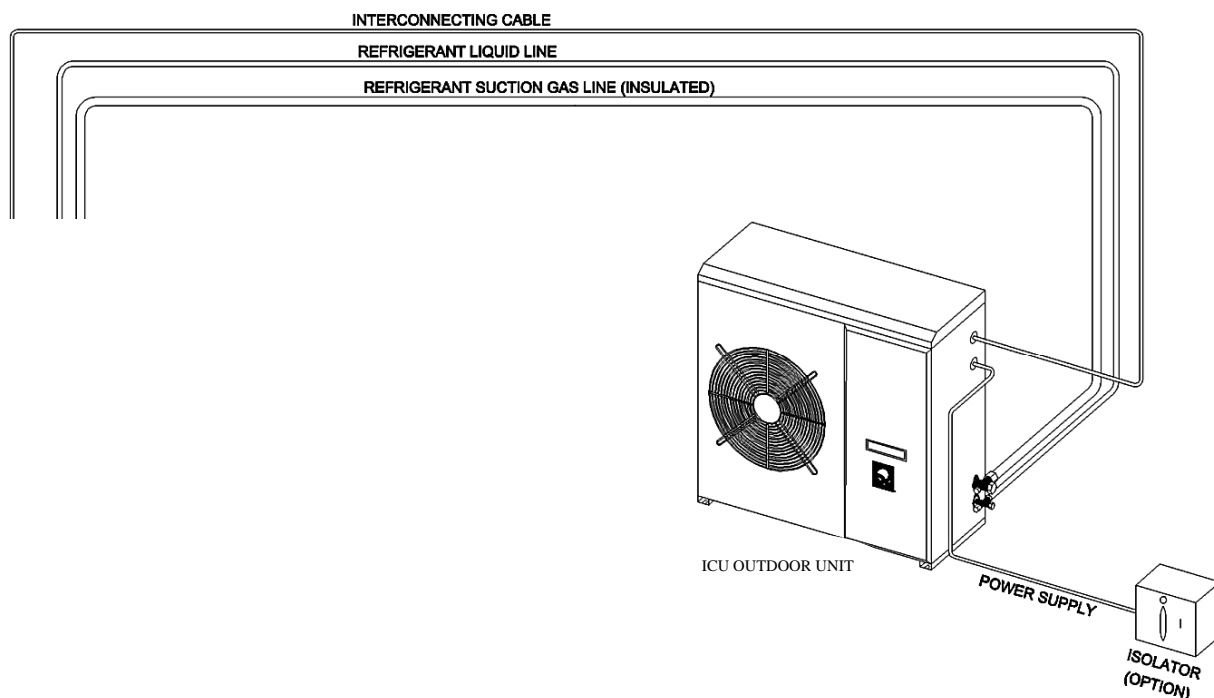


FIGURE 2.1

2.2 ICU Sizes & Weights

	ICU30	ICU40	ICU55	ICU80	ICU100	ICU135	ICU170
Width mm	720	720	800	800	1050	1050	1400
Height mm	610	610	765	765	765	765	765
Depth mm	250	250	320	320	320	320	320
Weight kg	40	40	60	61	88	90	97

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3. LOCATION & MOUNTING OF OUTDOOR UNIT (ICU)

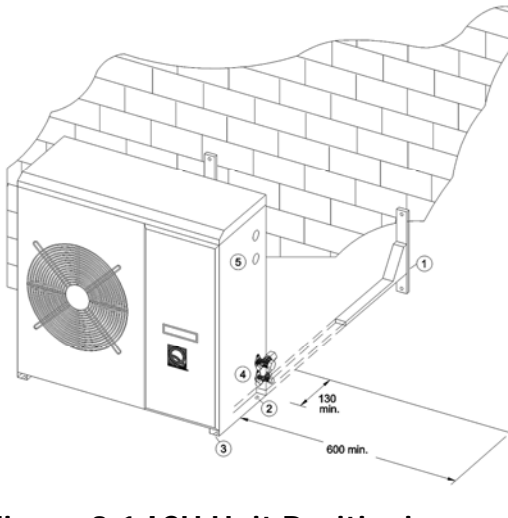


Figure 3.1 ICU Unit Positioning

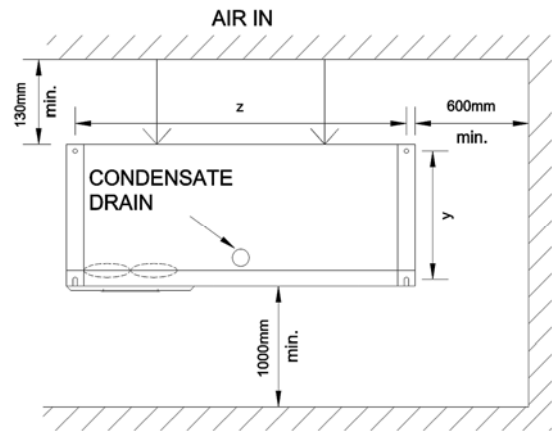


Figure 3.3 – ICU Wall Bracket Fixing

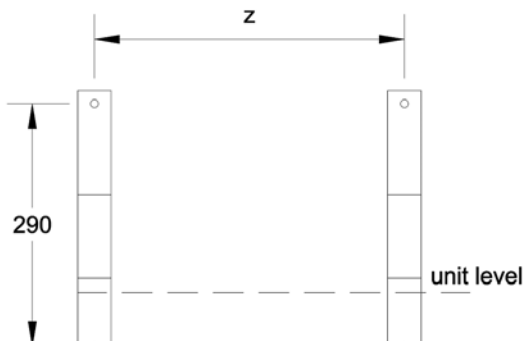


Figure 3.2 ICU Unit Fixing

	ICU30	ICU40	ICU55	ICU80	ICU100 ICU135
Dim 'y'mm	220	220	290	290	290
Dim 'z'mm	670	670	750	750	1000

3.1 Location

The unit can either be mounted on a level surface or suspended from a vertical wall using the wall mounting Optional kit (1) (not available on ICU170 Units). The unit should always be mounted on a load bearing wall and not a partition wall. Ensure there is sufficient free area around the unit as detailed in Figure 3.2.

3.2 Fixing

Two-off hole fixings (2) and two-off slot fixings (3) suitable for M10 fixings are provided in the base of the unit to secure the unit to a suitable plinth, or to the wall mount bracket kit. If required, the contractor should install the unit on anti-vibration pads.

3.3 Service Connections

The refrigerant pipe (4) and electrical connections (5) are located at the right hand end of the unit. A loose drain connector is supplied for connection on heat pump units where required.

3.4 Air Entry

Ensure there is adequate air entry at the back of the unit as detailed in Figure 3.2 above.

SPECIAL NOTE

ENSURE CONDENSER HAS ADEQUATE CLEARANCE AROUND IT AND IS NOT AFFECTED BY NEIGHBOURING CONDENSING UNITS AND OTHER OBSTRUCTIONS.

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4. OUTDOOR UNIT ACCESS (ICU)

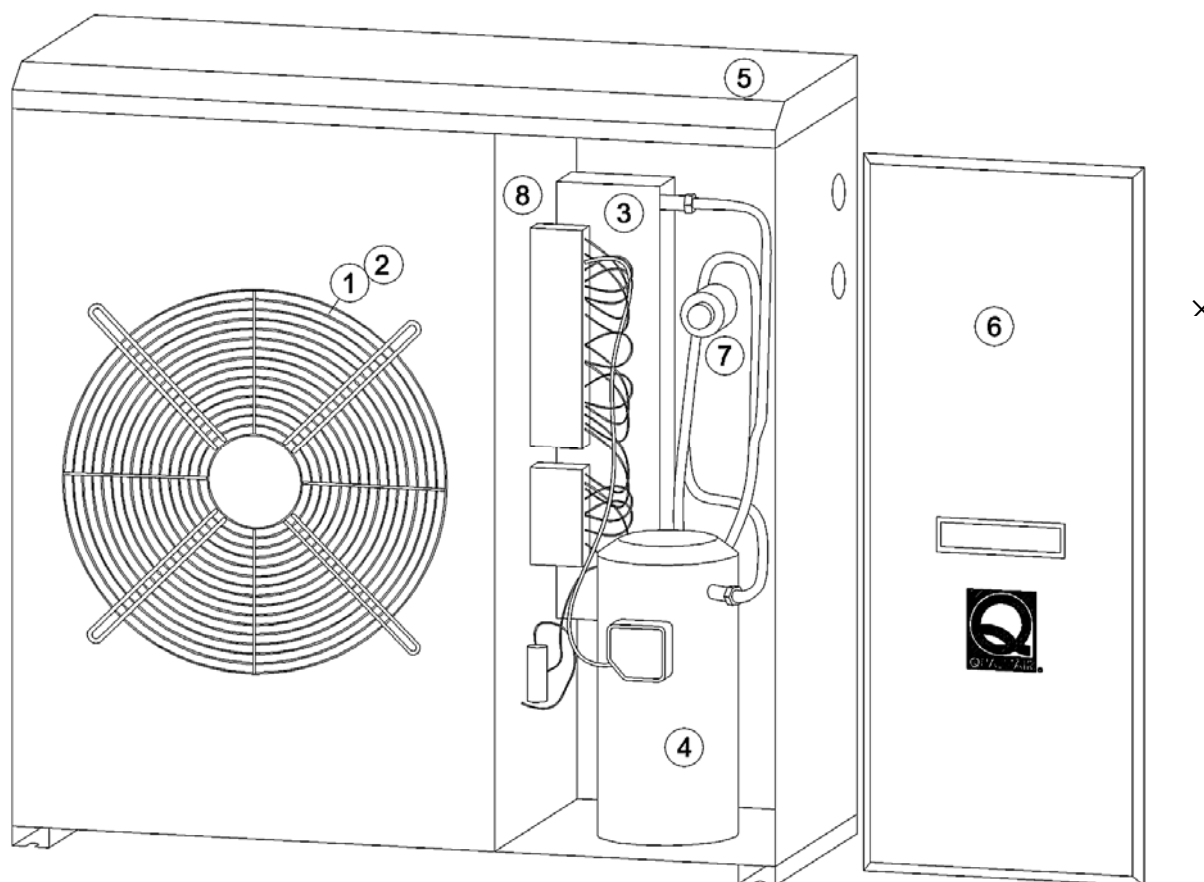


Figure 4.1 – Unit Internal Access

4.1 Access Details/Fixings

Item No.	Unit Component	Access Details/Fixings
(1)	Fan guard	Front access set screw fixings
(2)	Fan/motor ((fixed to rear of fan guard)	Front access set screw fixings on guard
(3)	Condenser coil	Access from rear of unit
(4)	Compressor	Remove "service access panel"
(5)	Removable top panel	Front and side access screw fixings
(6)	Service access panel	Front access screw fixings
(7)	Reversing valve (Heat pump unit only) HP & LP cut-outs.	Remove "service access panel"
(8)	Electrics/customers connection	Remove "service access panel"
(9)	Unit wiring diagram	Remove "service access panel"

SPECIAL NOTES

CHECK THAT INDOOR UNIT IS CORRECTLY MATCHED TO THE OUTDOOR UNIT. ALL PIPEWORK, INSULATION AND ELECTRICAL CABLING IS TO BE SUPPLIED BY OTHERS.
UNIT WIRING DIAGRAM IS FIXED TO INSIDE OF FRONT ACCESS PANEL (6),
HP SWITCH IS LOCATED ON THE COMPRESSOR DISCHARGE; LP SWITCH ON THE COMPRESSOR SUCTION CONNECTION.

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5. GENERAL SERVICE CONNECTIONS

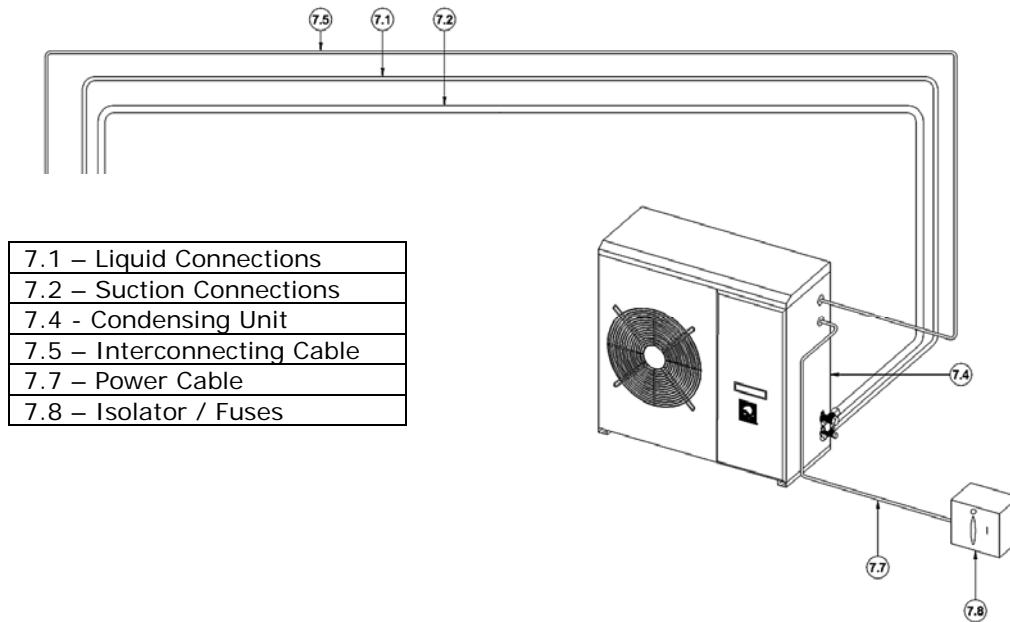


Figure 5.1 – Unit Connections and Interconnections

SPECIAL NOTES

CHECK LOCAL REGULATION FOR INDOOR / OUTDOOR ELECTRICAL ISOLATION REQUIREMENTS AND REFRIGERATION PIPEWORK STANDARDS.

Refrigerant Connection Sizes – Refer to Section 8 for Extended Pipework

	ICU30	ICU40	ICU55	ICU80	ICU100	ICU135	ICU170
Liquid 7.1	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	1/2"
Suction 7.2	5/8"	5/8"	5/8"	3/4"	3/4"	7/8"	7/8"

Mains Power Cable – No of Cores

	ICU30	ICU40	ICU55	ICU80	ICU100	ICU135	ICU170
Single Phase System	3	3	3	3	3	N/A	N/A
Three Phase System	N/A	N/A	N/A	5	5	5	5

ICU 1 Phase Fuse Rating

	ICU30	ICU40	ICU55	ICU80	ICU100
Run Current (A)	2	6.6	10.6	16.1	25
Locked Rotor Current (A)	28	28	53	82	114
HRC Fuse Rating (A)	10	10	16	20	32

ICU 3 Phase Fuse Ratings – (AMPS/Phase)

	ICU80	ICU100	ICU135	ICU170
Run Current (A)	6	7.5	11	15.5
Locked Rotor Current (A)	33	49	62	95.8
HRC Fuse Rating (A)	10	16	20	32

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6. POWER & CONTROL CONNECTIONS

ICU SINGLE PHASE COOLING ONLY

ICU Terminal	Customer Connections
PE	Customer Earth Connection
E	
N	Customer Neutral Connection
L	Customer Live Connection
C	Cooling Signal (From Indoor Unit)
S	Motor speed control sensor

ICU SINGLE PHASE HEAT PUMP

ICU Terminal	Customer Connections
PE	Customer Earth Connection
E	
N	Customer Neutral Connection
L	Customer Live Connection
C	Cooling Signal (From Indoor Unit)
S	Motor speed control sensor
RV	Heating signal (from Indoor unit)
H	Heating Signal (From Indoor Unit) – defrost heating.

ICU THREE PHASE COOLING ONLY

ICU Terminal	Customer Connections
PE	Customer Earth Connection
E	
N	Customer Neutral Connection
L1	Customer Live Connection
L2	Customer Live Connection
L3	Customer Live Connection
C	Cooling Signal (From Indoor Unit)
S	Motor speed control sensor

ICU THREE PHASE HEAT PUMP

ICU Terminal	Customer Connections
PE	Customer Earth Connection
E	
N	Customer Neutral Connection
L1	Customer Live Connection
L2	Customer Live Connection
L3	Customer Live Connection
C	Cooling Signal (From Indoor Unit)
S	Motor speed control sensor
RV	Heating signal (from indoor unit)
H	Heating Signal (From Indoor Unit) – defrost heating.

Table 6.1 – Electrical Connection Details

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6. POWER & CONTROL CONNECTIONS Cont

6.1 Wiring-up the Unit

Electrical terminations should be made onto the screw terminal side of the outdoor unit terminal blocks.

6.2 Wiring Requirements

Power supply – Connection of isolation power supply to the outdoor unit.

Interconnecting Wiring – Power and signal cables run between outdoor and indoor unit.

Details of the fuse ratings and cable requirements are given in the tables in Section 5 Page 7, of this manual.

Note: On units with 3-phase power supplies, ensure the 3 phases are connected in the correct rotation ie L1, L2, L3. If the phase rotation is incorrect, the compressor will fail to pump and will likely be noisy. If this is the case, two phases will need to be swapped over to achieve correct rotation.

6.3 Terminations

Details of cable terminations and interconnections are given in Table 6.1.

6.4 Wiring Diagrams

These are fitted to the inside of the access door.

SPECIAL NOTES :

REFER TO KIT INSTRUCTIONS FOR ELECTRICAL CONNECTION OF SITE OPTION KITS!!

DO NOT MEGGER OR FLASH TEST WITH ELECTRONIC PCB'S IN CIRCUIT!!

INDOOR AND OUTDOOR UNITS SHOULD HAVE LOCAL ELECTRICAL ISOLATORS.

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7. REFRIGERANT PIPE CONNECTIONS

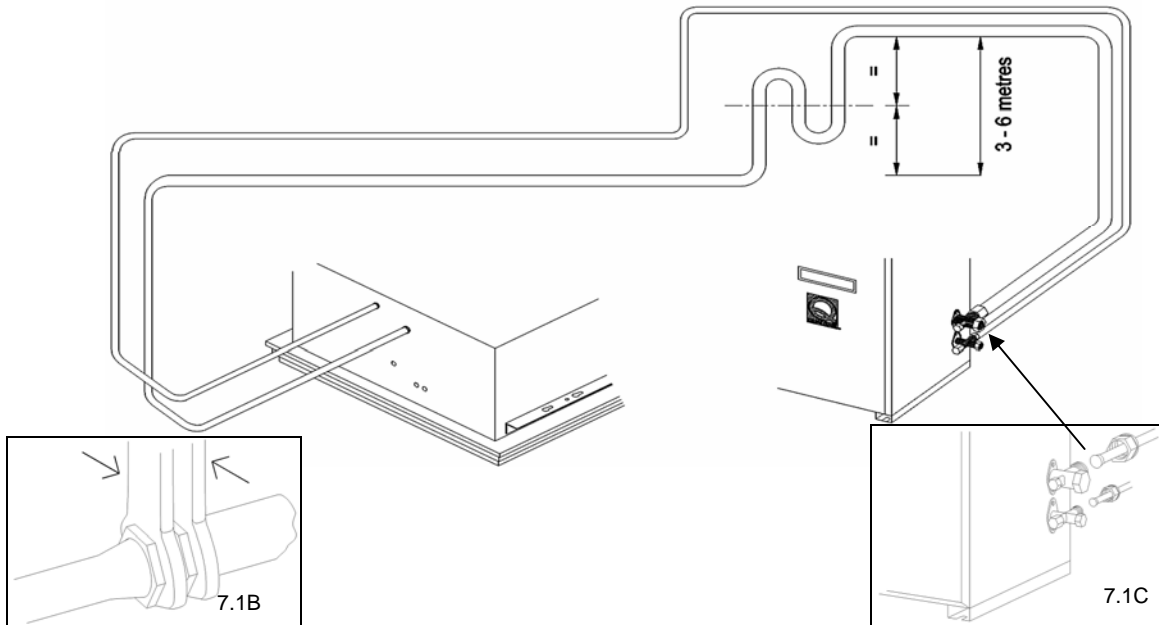


Figure 7.1 – Refrigerant Pipe Connections

7.1 Expansion Device

- ❑ ICU Cooling Only Units DO NOT HAVE an expansion device as this is supplied with the indoor unit.
- ❑ ICU Heat Pump Units can be supplied with a separate expansion device kit that should be installed in the liquid line.

7.2 Pipe Installation

Run the suction and liquid lines in appropriately sized refrigeration copper tubing, using the detailed tables on pages 11 & 12 of this manual as a guide. When calculating the effective run take into account any bends or oil traps as described in table 7.1 on page 12.

A filter drier and site glass should be fitted in the liquid line.

Where the vertical separation exceeds 3 metres, oil traps must be fitted at half the vertical distance as shown on Figure 7.1 above. Ensure the refrigerant lines are adequately supported using refrigerant pipe clips. ICU170 units are supplied with a length of 7/8" od flared pipe to assist connection to shut off valve.

7.3 Unit Connections

The ICU unit connections are terminated in male flare connections as detailed in the tables in Section 5, page 7, of this manual. Place flare nuts onto the copper tube before preparing the tube with a flaring tool (7.1C). When connecting to the male flares ensure both surfaces are clean and coat the flared surface with refrigerant oil to help ensure a leak-free joint. When tightening the joint use two spanners to prevent twisting of the connections as detailed in figure 7.1B above.

7.4 Insulation

Suction lines must be insulated to a minimum thickness of 3/8". Hot areas should be avoided when routing liquid lines and consideration should be given to separate insulation of liquid lines, where required, to prevent heat absorption.

SPECIAL NOTE

SLEEVE, SEAL AND WATERPROOF ANY BUILDER WORKS HOLES!
IT IS RECOMMENDED THAT A FILTER / DRIER IS FITTED IN THE REFRIGERATION CIRCUIT.

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7.5 ICU – RECOMMENDED LINE SIZES

R407 Cooling Units

	ICU30	ICU40	ICU55	ICU80	ICU100	ICU135	ICU170
Base Charge (g)	600	1100	1600	1900	2800	3700	4500

R407c heat pump units are supplied with a holding charge of Nitrogen only.

Horizontal or Downflow application (Suction Line)


Based on 5psi (0.35bar) Pressure drop

		Line Length (m)															
Table A		5	10	15	20	25	30	35	40	45	50	60	70	80	90	100	
ICU30	Suction	3/8"	1/2"	1/2"	1/2"	1/2"	5/8"										3/4"
	Liquid	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"										DO NOT USE THIS AREA
ICU40	Suction	1/2"	1/2"	1/2"	5/8"	5/8"	5/8"						3/4"				
	Liquid	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"										DO NOT USE THIS AREA
ICU55	Suction	1/2"	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	7/8"	7/8"	7/8"	7/8"	
	Liquid	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	
ICU80	Suction	5/8"	5/8"	3/4"	3/4"	3/4"	3/4"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	11/8"	
	Liquid	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	
ICU100	Suction	5/8"	3/4"	3/4"	7/8"	7/8"	7/8"	7/8"	7/8"	11/8"	11/8"	11/8"	11/8"	11/8"	11/8"	11/8"	
	Liquid	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	
ICU135	Suction	3/4"	3/4"	7/8"	7/8"	7/8"	11/8"	11/8"	11/8"	11/8"	11/8"	11/8"	11/8"	11/8"	11/8"	11/8"	
	Liquid	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	
ICU170	Suction	3/4"	7/8"	11/8"	11/8"	11/8"	11/8"	11/8"	11/8"	11/8"	11/8"	13/8"	13/8"	13/8"	13/8"	13/8"	
	Liquid	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	

Upflow application (Suction Line)

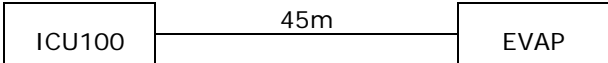
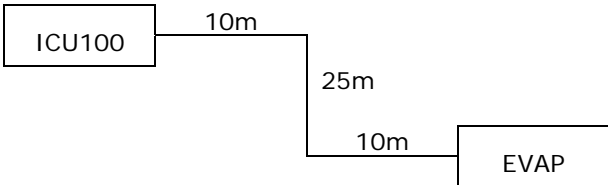
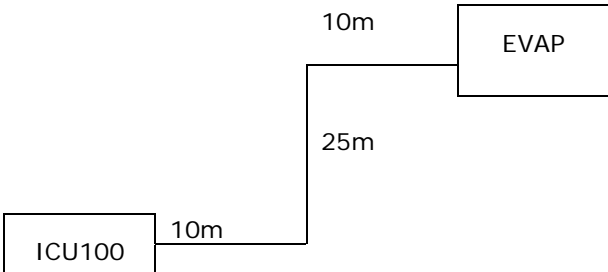
		Max Size	Max Lift	Additional Oil	R407c – kg Additional Charge
Table B	Suction	3/8"	5	None	>5m = 25g/m (1/4" Liquid)
	Liquid				
ICU40	Suction	1/2"	15	None	>5m = 25g/m (1/4" Liquid)
	Liquid				
ICU55	Suction	1/2"	8	None	>5m = 40g/m (3/8" Liquid) >30m = 105g/m (1/2" liquid)
	Liquid				
ICU80	Suction	3/4"	30	None	>5m = 40g/m (3/8" Liquid) >30m = 105g/m (1/2" liquid)
	Liquid				
ICU100	Suction	7/8"	35	None	>5m = 105g/m (1/2" Liquid) >25m = 175g/m (5/8" liquid)
	Liquid				
ICU135	Suction	7/8"	24	None	>5m = 105g/m (1/2" Liquid) >25m = 175g/m (5/8" liquid)
	Liquid				
ICU170	Suction	11/8"	50	None	>5m = 105g/m (1/2" Liquid) >25m = 175g/m (5/8" liquid)
	Liquid				

Note:

-  = DO NOT USE IN THIS AREA.
- Crankcase heaters are required where system charge exceeds 4.5kg and DOES NOT contain an accumulator.
- Maximum pipe run stated in Table A, must include the reduction allowance (equivalent length) for vertical lifts and fittings indicated in Tables in this section.

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7.6 EXAMPLE OF LINE SIZING

		FROM TABLE A	Horizontal Suction to be 1 1/8"
			Horizontal Liquid to be 5/8"
	TABLE B	Not applicable	
	Added Oil	None required	
<hr/>			
		FROM TABLE A	Horizontal Suction to be 1 1/8"
			Horizontal Liquid to be 5/8"
	TABLE B	Vertical Suction 3/4"	
		Vertical Liquid 5/8"	
	Added Oil	None required	
<hr/>			
		FROM TABLE A	Horizontal Suction to be 1 1/8"
			Horizontal Liquid to be 5/8"
	TABLE B	Not applicable	
	Added Oil	None required	

Fitting	Pipe Size					
	3/8"	1/2"	5/8"	3/4"	7/8"	1 1/8"
45° Bend	0.12	0.15	0.18	0.21	0.24	0.30
90° Bend Short Radius	0.37	0.43	0.49	0.55	0.61	0.79
90° Bend Long Radius	0.24	0.27	0.30	0.37	0.43	0.52
180° Bend Short Radius	0.73	0.91	1.10	1.28	1.46	1.83
180° Bend Long Radius	0.46	0.55	0.64	0.76	0.85	1.07
90° Elbow	0.67	0.85	1.04	1.25	1.46	1.89

Table 7.1 – Equivalent Lengths (m)

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8. REFRIGERATION COMMISSIONING

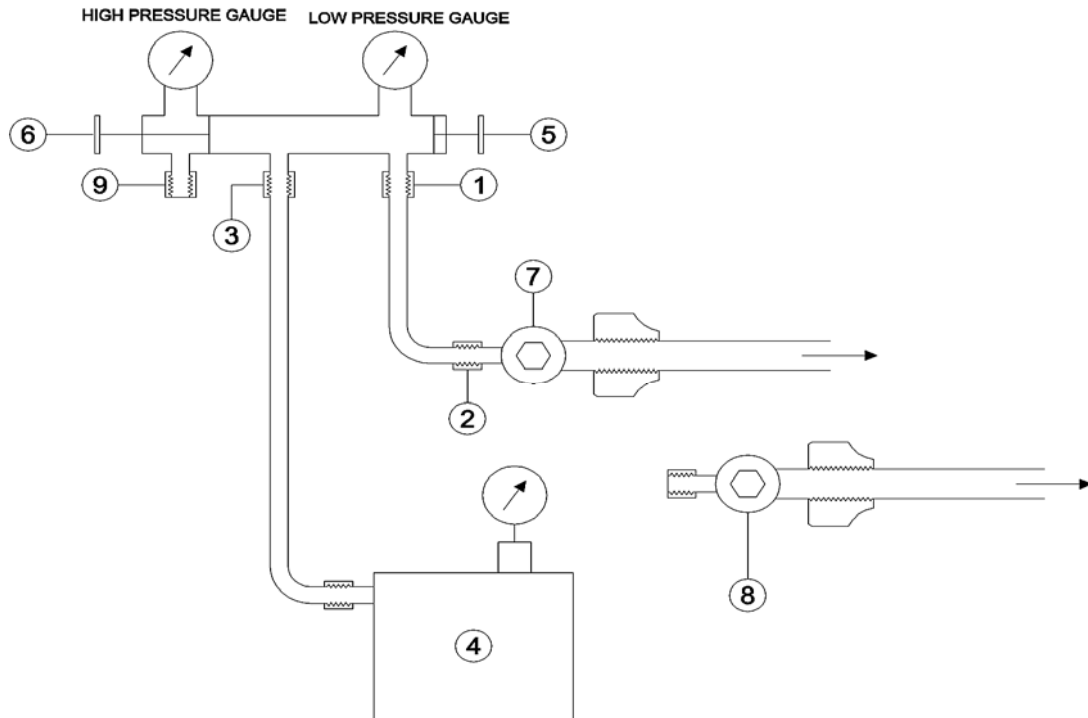


Figure – 8.1 Evacuation and Charging Connections

8.1 Evacuation, Charging and Refrigerant Procedures

After completing the refrigerant connections the following steps should be followed with reference to Figure 8.1 above.

- 1) Service gauges - Connect the low pressure port (1) of a manifold gauge set to the suction line outdoor unit shut off valve service port (2).
- 2) Vacuum Pump - Connect the centre line port (3) of the manifold gauge set to the vacuum pump (4) and operate the pump to ensure a vacuum of 200 microns.
Note: Ensure gauge low pressure port (5) is open and high pressure port (6) is closed.
- 3) System Isolation - After achieving the specified system vacuum close the gauge low pressure port (5) and switch off the vacuum pump. Leave the system for 1 hour and check that the vacuum is maintained. If not, check for leaks, rectify and repeat the pumping down to 200 microns.
- 4) Refrigerant Charging - Open both the outside unit shut off valves (7 & 8). Weigh in the appropriate charge using a charging station.
- 5) Disconnect the vacuum pump and connect the gauge high pressure port (9) to the discharge line of the outdoor unit shut-off valve (10), ensuring that the gauge central port (3) is closed. Run the system, allow pressures to stabilise and ensure correct operation. After final commissioning remove the gauge set, fit all valve caps and carry out a final refrigerant leak test.

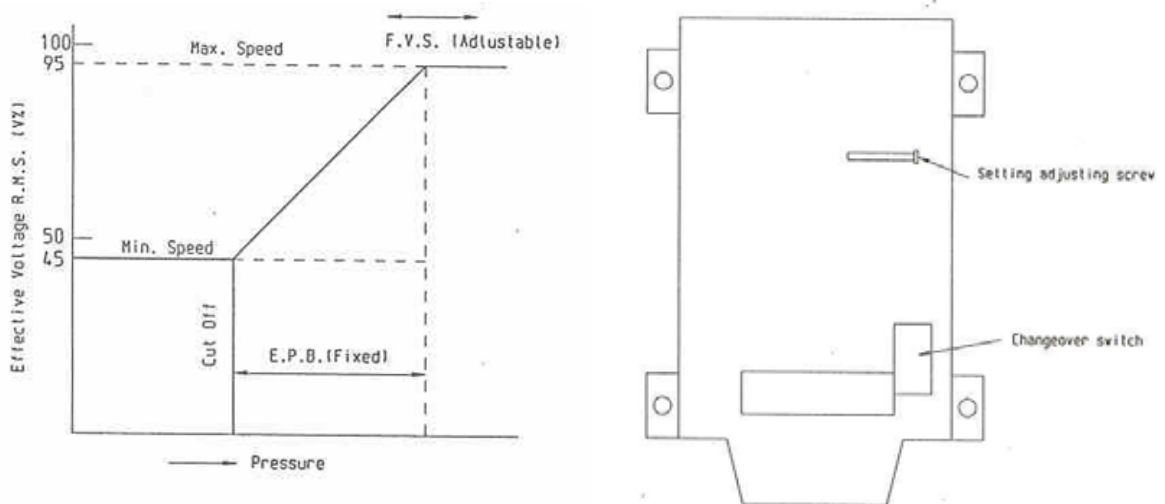
This being a stand-alone condensing unit, the match to the indoor unit and appropriate charge are the responsibility of the installer.

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8. REFRIGERATION COMMISSIONING Cont

8.2 Pressure Sensing Fan Speed Controller

This is factory set and should not require any adjustment.



8.3 Description of Operation (FSC)

The fan speed controller regulates the speed of the air cooled condenser fan motor for the general purpose of cooling the unit by phase control, and keeps a definite condensing pressure to ensure stability.

WARNING
Before adjusting be sure to TURN OFF THE POWER SUPPLY.

Adjustment Method

1. Range adjustment
The set value 1.9Mpa (19bar) increases when turning the adjusting screw clockwise (CW) and it decreases when turning the adjusting screw counter clockwise (CCW).

NOTE:
TEMPERATURE SENSING FAN SPEED CONTROLLER ONLY.
TO RUN FAN SPEED CONTROLLER AT MINIMUM SPEED DISCONNECT ONLY ONE OF THE SENSOR LEADS
TO RUN FAN SPEED CONTROLLER AT MAXIMUM SPEED DISCONNECT BOTH SENSOR LEADS AND LINK OUT THE TWO TERMINALS.

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9. ANCILLARY SERVICE CONNECTIONS

9.1 Heat Pump De-Frost Condensate Removal

Thought should be given to de-frost water from Heat Pump Outdoor units and the potential danger from freezing if allowed to run onto a roof or similar area.

A separate drain tube plate is provided with the unit which fits over a 15mm sleeve and onto the bare drain hole. Use 2-off N°12 self-tapping screws.

To prevent drain pipe from freezing in prolonged sub-zero temperatures, drain line heater boxes or heater tape should be considered.

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10. DISPOSAL PROCEDURES

NOTE!

All refrigerant, oils and other waste materials must be disposed of in a professional and responsible manner in strict adherence to environmental regulations.

NOTE!

The greatest possible care should be taken at all times to avoid the release of refrigerants to atmosphere.

The de-commissioning, dismantling and disposal of air handling units should be undertaken only by experienced personnel and in full adherence to all safety rules, in particular protection of lungs, eyes and skin from refrigerants, dust, etc. Only approved lifting gear and power tools should be used and access to the work area be restricted to authorised personnel.

- ☐ **Disconnect the unit from the electrical supply.**
- ☐ **Reclaim all refrigerant from the unit using approved reclaiming equipment according to the manufacturer's instructions. Recovery of refrigerant must be carried out only by operatives registered to refrigerant safe handling.**
- ☐ **Dispose of the reclaimed refrigerant through an approved recycling facility.**
- ☐ **Separate the unit sections and remove to approved recycling facilities.**

SPECIAL NOTE:

ENSURE ALL CONNECTIONS EXTERNAL TO THE UNIT CASING AND DRAIN PIPEWORK ARE ADEQUATELY INSULATED TO PREVENT FREEZING OR CONDENSATION.

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11. FINAL CHECKS

	Check
1) Have all options kits been fitted ?	
2) Have units been mounted level and correct drainage been checked?	
3) Have the suction line, expanded liquid line (if required) and condensate drains (if required) been adequately insulated?	
4) Has correct HRC external fusing / isolating been installed.	
5) Has additional extended pipe-run refrigerant charge been measured into the system, where necessary or heat pumps been charged correctly?	
6) Is there adequate room and access to remove the access panels ?	
7) Has the control system been explained to the customer and the operating manual sheet handed over with the appropriate sections completed?	
8) Has the warranty booklet been read and completed? Note: - If a service contract is not taken out only a 1-year warranty is applicable.	

ICU CONDENSING UNIT INSTALLATION MANUAL

12. WIRING DIAGRAM NUMBERS

This page gives wiring diagram numbers for each type of ICU Outdoor Unit. The diagrams themselves are supplied with the unit and are located in the electrical section. Please ensure the correct issue drawing is used with the relevant system – refer to supplier if necessary.

Unit Ref	Function	Type	Phase	Wiring Diagram	Part N°
ICU30, 40	Cooling Only	Condensing Unit	1-ph (TS FSC)	A3LBD137	J90733 J90743
ICU55, 80	Cooling Only	Condensing Unit	1-ph (TS FSC)	A3LBD138	J90763 J90783
ICU80	Cooling Only	Condensing Unit	3-ph (TS FSC)	A3LBD139	J90784
ICU100	Cooling Only	Condensing Unit	1-ph (PS FSC)	A3LBD140	J90723
ICU100, 135, 170	Cooling Only	Condensing Unit	3-ph (PS FSC)	A3LBD141	J90724 J90714 J90794
ICU30, 40	Cooling Only	Condensing Unit	1-ph (PS FSC)	A3LBD143	J90733 J90743
ICU55, 80, 100	Cooling Only	Condensing Unit	1-ph (PS FSC)	A3LBD144	J90763 J90783 J90723
ICU80, 100, 135, 170	Cooling Only	Condensing Unit	3-ph (PS FSC)	A3LBD145	J90784 J90724 J90714 J90794
ICU80, 100, 135, 170	Heat pump	Condensing Unit	3-ph (PS FSC)	A3LBD146	J90786 J90726 J90716 J90796
ICU40, 55, 80, 100	Heat pump	Condensing Unit	1-ph (PS FSC)	A3LBD147	J90745 J90765 J90785 J90725

ICU CONDENSING UNIT INSTALLATION MANUAL

CE CERTIFICATE

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(Eaton-Williams Ltd)

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ELECTROMAGNETIC COMPATIBILITY DIRECTIVE

89/336/EEC

MACHINERY DIRECTIVE

EC Declaration of Conformity

As Defined by the EC Council Directive on Machinery

89/392/EEC Annex IIA and amended by

91/368/EEC - 93/44/EEC & 93/68/EEC

We declare that the equipment designated below,
on the basis of design and construction in the form marketed by us and
when installed and operated in accordance with our information and instructions,
conforms to the EMC Directive, the PED and the essential Health and Safety requirements of the Machinery
Directive.

If alterations are made to this equipment without our approval,
this declaration becomes invalid. Furthermore, this equipment may be
assembled into other systems which may also constitute machinery and shall
not be put into service until the assembled system has been declared in conformity
with the Machinery Directive.

Model

Serial N°

Standards Applied

EMC

EMC

Low Voltage

Pressure Equipment

Controls Applied

BS EN 292-Pt2

BS EN50081-1

BS EN50082-1

EN60204 pt1

prEN14276-2

BS EN ISO 9001: 1994

BSI Registered Company Q5026

Gerry Stapley

Gary Martin

Managing Directors

ICU CONDENSING UNIT INSTALLATION MANUAL

The logo for Qualitair, featuring the word "QUALITAIR" in white, uppercase, sans-serif font, centered within a solid magenta rectangular background.

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AN EATON-WILLIAMS COMPANY

As part of the policy of continuous product improvement, we reserve the right to alter specifications without notice